

1    **Abstract:**

2    An event-driven system that provides scheduling and resource allocation for an  
3    internet serve. A cost-benefit model and user preferences are used to prioritize and  
4    schedule tasks. The present invention improves or optimizes a network server's  
5    performance by prioritizing tasks according to their importance, cost, and the system  
6    owners desires. The tasks are scheduled and resources (for example memory) are  
7    allocated to the tasks in accordance with their priority. Interlayer communication is used to  
8    provide a faster way to move data and to provide feedback as to the current state of a  
9    particular layer. Header parsing and peeking provides a way to make decisions earlier  
10   rather than waiting for the necessary information to bubble up to a higher layer. A thin  
11   thread model is used to handle tasks. The progress of the thin threads relative to each  
12   other is monitored and controlled.